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| 09/843,198 | 04/26/2001 | John R. Hind | RSW9-2001-0016-US1 | 8824 |

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EXAMINER

STEVENS, ROBERT

ART UNIT PAPER NUMBER

2176

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,198

Applicant(s)

HIND ET AL.

Examiner

Robert M Stevens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892) ^a
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-31 are pending in Application No. 09/843,198, entitled "Efficient Processing of eXtensible Markup Language Documents in Content-Based Routing Networks", filed 4/26/2001 by Lemon et al. Claims 1, 14, 21, 24 and 27 are independent.
2. As of the date of this communication, no Information Disclosure Statement has been filed.
3. The Office acknowledges replacement drawings filed 7/16/01.

Priority

4. Applicant makes no claim to either domestic or foreign priority.

Specification

5. The disclosure is objected to because of the following informalities:
 - A. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: "Conversion of XML to mXML for Subsequent

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Message Exchanges Between Business Partners in an eCommerce Environment”.

- B. Applicant is reminded to please correct all spelling/grammatical/etc. mistakes throughout the specification (including the claims and drawings).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 (line 1, 14 (line 6), 21 (line 3), 22 (line 2), 24 (line 1), 25 (line 2) and 27 (lines 5-6), the recited language “human friendly” renders the claim scope ambiguous.

Claims 2-13, 15-20, 23, 26 and 28-31 are dependent upon the above-referenced claims, as appropriate, and therefore likewise rejected.

Further regarding claims 10 and 28: these claims reverse a first document conversion after determining that the first conversion should not have been performed in the first place. If this is Applicant's intended position, then this rejection will be withdrawn. However, the Office notes that such claims mitigate against Applicant's assertion (in the title) as to "efficient processing". Thus the scope of these claims are vague and indefinite.

Claims 1-12 and 29-31 are dependent upon claims 10 and 28, respectively, and therefore likewise rejected.

Further regarding claim 21, there is a lack of antecedent basis as to "said output document encoded in XML" (lines 7-8 of the claim).

Claims 21-22 are dependent upon claim 21, and therefore likewise rejected.

Further regarding claim 23, there is a lack of antecedent basis as to "the processing" (last line of the claim). A parsed document is already created via the processing steps of lines 1-20 of this claim. The referenced last line results in a re-parsing of the parsed document. This claim is vague and indefinite.

Further regarding claim 31, the claim, as written, depends upon itself. Thus the scope of this claim is vague and indefinite. For the purposes of further examination, claim 31 will be considered to be dependent upon claim 30.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 1-4, 6-12, 14-16, 18-21, 24 and 27-31 are rejected under 35**

U.S.C. 103(a) as being unpatentable over Abjanic et al (US Patent Application

Publication No. 2003/0069975 filed Dec. 22, 2000 and relying upon CIP application filed 5/8/00 [09/566,800], which in turn relies upon CIP filed 4/13/00 [09/549,041], and further relying upon CIP application filed 5/1/00 [09/562,104], said Publication hereafter referred to as "Abjanic").

Regarding independent claim 1, Abjanic discloses:

A method for processing an input document encoded in an extensible human-friendly extensible markup language ("XML"), said method comprising the steps of:

(a) converting said input document encoded in XML to an output document ([0072] re: "XML ... formats" and "transform from a first format to a second format") ... ;

(b) processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.) ... ;

(c) identifying a target to which the processed output document will be next routed; ([0073], disclosing content based and address based routing) and

(d) determining whether said target is capable of processing documents ([0070]) ...

Abjanic, though, does not explicitly disclose:

- (a) ... encoded in a machine-oriented extensible markup language ("mXML");*
- (b) ... encoded in mXML;*
- (c) ... and*
- (d) ... encoded in mXML.*

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would enable clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 2, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein step (c) comprises parsing the processed output document. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Regarding claim 3, which is dependent upon claim 2, the limitations of claim 2 have been previously addressed.

Abjanic further discloses:

wherein step (c) comprises identifying a host name string for routing of the processed output document. ([0039] and [0040] in context of [0073], especially table below [0039] re: "bookstore.com")

Regarding claim 4, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein step (d) comprises referencing a datastore, said datastore storing data identifying a plurality of targets and indicating whether each of said plurality of targets is capable of processing documents encoded in mXML. ([0039] and [0040] in context of [0073], especially table below [0039] re: "bookstore.com", "stockquote.com", etc., and noting that a table must be stored in memory [i.e., a datastore.])

Claim 6 is substantially similar to claim 2, and therefore likewise rejected.

Regarding claim 7, which is dependent upon claim 6, the limitations of claim 6 have been previously addressed.

Abjanic further discloses:

wherein step (b1) comprises the step of:

(b1a) extracting routing data from said output document. ([0039] and [0040] in context of [0073], especially table below [0039] re: "bookstore.com")

Regarding claim 8, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein step (b) comprises the step of:

(b1) transmitting the processed output document to said target if said target is determined in step (d) to be capable of processing documents encoded in mXML. ([0040] and [0041], especially [0041] re: "orders sent to bookstore.com")

Regarding claim 9, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein step (b) comprises the step of:

(b1) processing said output document for content based routing if said target is determined in step (d) to be capable of processing

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documents encoded in mXML. ([0040] and [0041], especially [0041] re: "orders sent to bookstore.com")

Regarding claim 10, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

further comprising the step of:

(e) converting said processed output document encoded in mXML to an output document encoded in XML if said target is determined in step (d) to be not capable of processing documents encoded in mXML. ([0072], re: transform from a first to a second format)

Regarding claim 11, which is dependent upon claim 10, the limitations of claim 10 have been previously addressed.

Abjanic further discloses:

further comprising the step of:

(f) processing the converted output document encoded in XML. ([0036], re: parsing the XML data and verifying that it is well formed)

Regarding claim 12, which is dependent upon claim 11, the limitations of claim 11 have been previously addressed.

Abjanic further discloses:

wherein step (f) comprises transmitting the converted output document encoded in XML to said target. ([0040] and [0041], especially [0041] re: "orders sent to bookstore.com")

Regarding independent claim 14, Abjanic discloses:

A method for processing an input document encoded in a machine-oriented extensible markup language ("mXML"), said method comprising the steps of:

- (a) determining whether said input document will be next routed to a target which is capable of processing documents ([0070]) ... ;*
- (b) converting said input document ... to an output document encoded in a human friendly extensible markup language ("XML") if said target is determined in step (a) to be not capable of processing documents ([0072], re: transform from a first to a second format) ... ; and*
- (c) processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)*

Abjanic, though, does not explicitly disclose:

- (a) ... encoded mXML);*
- (b) ... encoded in mXML ... encoded in mXML; and*
- (c) ... encoded in mXML.*

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would enable clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 15, which is dependent upon claim 14, the limitations of claim 14 have been previously addressed.

Abjanic further discloses:

wherein step (a) comprises the steps of:

*(a1) identifying a target to which said input document will be next routed; ([0073], disclosing content based and address based routing) and
(a2) determining whether said target is capable of processing documents encoded in mXML. ([0070])*

Claim 16 is substantially similar to claim 4, and therefore likewise rejected.

Regarding claim 18, which is dependent upon claim 14, the limitations of claim 14 have been previously addressed.

Abjanic further discloses:

further comprising the step of:

(d) processing said input document encoded in mXML. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Regarding claim 19, which is dependent upon claim 18, the limitations of claim 18 have been previously addressed.

Abjanic further discloses:

wherein step (d) comprises parsing said input document encoded in mXML. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Claim 20 is substantially similar to claim 8, and therefore likewise rejected.

Regarding independent claim 21, Abjanic discloses:

A computer program product embodied on one or more computer-readable media, the computer program product adapted for processing an input document encoded in an extensible human-friendly extensible markup language ("XML") and comprising:

(a) computer-readable program code for converting said input document encoded in XML to an output document ([0072] re: "XML ... formats" and "transform from a first format to a second format") ... ;

(b) computer-readable program code for processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.) ... ;

(c) computer-readable program code for identifying a target to which the processed output document will be next routed; ([0073], disclosing content based and address based routing) and

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(d) computer-readable program code for determining whether said target is capable of processing documents ([0070])

Abjanic, though, does not explicitly disclose:

- (a) ... encoded in a machine-oriented extensible markup language ("mXML");*
- (b) ... encoded in mXML;*
- (c) ... ; and*
- (d) ... encoded in mXML.*

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would enable clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding independent claim 24, Abjanic discloses:

A system for processing an input document encoded in an extensible human-friendly extensible markup language ("XML"), said system comprising:

(a) means for converting said input document encoded in XML to an output document ([0072] re: "XML ... formats" and "transform from a first format to a second format") ... ;

(b) means for processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.) ... ;

(c) means for identifying a target to which the processed output document will be next routed; ([0073], disclosing content based and address based routing) and

(d) means for determining whether said target is capable of processing documents ([0070])

Abjanic, though, does not explicitly disclose:

(a) ... encoded in a machine-oriented extensible markup language ("mXML");

(b) ... encoded in mXML;

(c) ... and

(d) ... encoded in mXML.

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would enable clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding independent claim 27, Abjanic discloses:

A method for processing an input document comprising the steps of:
(a) determining whether said input document will be next routed to a target which is capable of processing documents ([0070]) ... ; and
(b) converting said input document to an output document encoded in a human friendly extensible markup language ("XML") if said input document is ... and said target is not capable of processing documents ([0072], re: transform from a first to a second format)

Abjanic, though, does not explicitly disclose:

(a) ... encoded in a machine-oriented extensible markup language ("mXML"); and
(b) ... encoded in mXML ... encoded in mXML.

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

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Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would enable clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 28, which is dependent upon claim 27, the limitations of claim 27 have been previously addressed.

Abjanic further discloses:

further comprising the step of:

(c) converting an original document encoded in XML to an input document encoded in a machine-oriented extensible markup language ("mXML"); step (c) being performed before step (a).. (Claim 28 is substantially similar to claim 10. Therefore see [0072], re: transform from a first to a second format)

Regarding claim 29, which is dependent upon claim 28, the limitations of claim 28 have been previously addressed.

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Abjanic further discloses:

wherein step (a) comprises the steps of:

*(a1) identifying a target to which said input document will be next routed; ([0073], disclosing content based and address based routing) and
(a2) determining whether said target is capable of processing documents encoded in mXML. ([0070])*

Regarding claim 30, which is dependent upon claim 29, the limitations of claim 29 have been previously addressed.

Abjanic further discloses:

wherein step (a1) comprises parsing said input document. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Regarding claim 31, which is dependent upon claim 30 (according to the Office's interpretation in regards to 35 USC 112 2nd issue), the limitations of claim 30 have been previously addressed.

Abjanic further discloses:

wherein step (a2) comprises referencing a datastore, said datastore storing data identifying a plurality of targets and indicating whether each of said plurality of targets is capable of processing documents encoded in mXML. ([0039] and [0040] in context of [0073], especially table below [0039] re; "bookstore.com", "stockquote.com", etc., and noting that a table must be stored in memory [i.e., a datastore.])

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10. **Claims 5, 13, 17, 22-23 and 25-26 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Abjanic et al (US Patent Application Publication No. 2003/0069975 filed Dec. 22, 2000 and relying upon CIP application filed 5/8/00 [09/566,800], which in turn relies upon CIP filed 4/13/00 [09/549,041], and further relying upon CIP application filed 5/1/00 [09/562,104], said Publication hereafter referred to as "Abjanic") in view of Elliotte Rusty Harold, XML: Extensible Markup Language, IDG Books Worldwide, Inc., Foster City, CA, © 1998, pp. 29-33, 69-70, 104-111 and 121-128, hereafter referred to as "Harold") and Robert LaFore et al., Data Structures & Algorithms in Java, Waite Group Press, Corte Madera, CA, © 1998, pp. 182-190, 293-299 and 328-339, hereafter referred to as "LaFore").

Regarding claim 5, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

However, Abjanic does not explicitly disclose:

wherein step (a) comprises the steps of:

- (a1) creating a document tree representation of the input document;*
- (a2) obtaining a node count representing a count of nodes in the document tree representation;*
- (a3) writing the node count to an mXML buffer;*
- (a4) traversing each node in the document tree representation and generating a corresponding node specification in the mXML buffer, further comprising the steps of:*
 - generating a node name;*
 - generating an attribute list specifying zero or more (attribute name, attribute value) pair references for attributes of the node;*
 - generating a child list specifying index values of zero or more nodes which are children of the node; and*
 - generating a node value specification, which is empty if the node has no value;*

(a5) generating a data buffer containing attribute names and attribute values referenced from the attribute lists and node values referenced from the node value specifications; and
(a6) appending the data buffer to the mXML buffer to form the output document.

Harold, though, discloses:

wherein step (a) comprises the steps of:

(a1) creating a document tree representation of the input document; (pp. 69-70, disclosing that XML [and XML derivative documents] are trees, especially last paragraph on p. 69 and first on p. 70 and Fig. 3.1.)

(a2) ... ;

(a3) ... ;

(a4) traversing each node in the document tree representation and generating a corresponding node specification in the mXML buffer (pp. 69-70, especially first paragraph regarding programs that read XML documents on p. 70 and Fig. 3.1.), further comprising the steps of:

generating a node name; (p. 121, re:

getAttribute(AttributeName))

generating an attribute list specifying zero or more (attribute name, attribute value) pair references for attributes of the node; (p. 104 re; Select() and p. 121, re: getAttribute(AttributeName))

generating a child list specifying index values of zero or more nodes which are children of the node; (p. 104 re; Select() and p. 121, re: getAttribute(AttributeName)) and

generating a node value specification, which is empty if the node has no value; (p. 121, re: getAttribute(AttributeName))

(a5) ... ; and

(a6) ()

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Harold for the benefit of Abjanic, because to do so would allow a programmer to process documents, such as XML, which have elements represented as linked data structures such as nodes, as taught by Harold in the first two sentences of p. 121. These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Further in regards to claim 5, Abjanic does not explicitly disclose:

wherein step (a) comprises the steps of:

(a1) creating a document tree representation of the input document;
(a2) obtaining a node count representing a count of nodes in the document tree representation;

(a3) writing the node count to an mXML buffer;

(a4) traversing each node in the document tree representation and generating a corresponding node specification in the mXML buffer, further comprising the steps of:

generating a node name;

generating an attribute list specifying zero or more (attribute name, attribute value) pair references for attributes of the node;

generating a child list specifying index values of zero or more nodes which are children of the node; and

generating a node value specification, which is empty if the node has no value;

(a5) generating a data buffer containing attribute names and attribute values referenced from the attribute lists and node values referenced from the node value specifications; and

(a6) appending the data buffer to the mXML buffer to form the output document.

LaFore, though, discloses:

wherein step (a) comprises the steps of:

(a1) ... ;

(a2) obtaining a node count representing a count of nodes in the document tree representation; (p. 330 Fig. 8.21 shows an array whose size is equal to the node count of a tree)

(a3) writing the node count to an mXML buffer; (p. 333, Assignment of values to a variable [buffer] name is well known in the art. See p. 333 code listing disclosing the insert() member where the variable/buffer iData is assigned the integer value id.)

(a4) ... :

... ;

... ;

... ; and

... ;

(a5) generating a data buffer containing attribute names and attribute values referenced from the attribute lists and node values referenced from the node value specifications; (Creating a buffer is well known in the art. For example, see p. 187 code disclosing the DoublyLinkedList() constructor method) and

(a6) appending the data buffer to the mXML buffer to form the output document. (Appending to a databuffer is well known in the art. For example, see the p. 187 code listing disclosing the insertLast() method)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of LaFore for the benefit of Abjanic and Harold, because to do so would allow a programmer to process linked data structures, as taught by LaFore in the code listings of pp. 333-339 (regarding tree processing) and pp. 187-190 (regarding linked list processing). These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Abjanic, Harold and LaFore were all applicable to the same field of endeavor, i.e., object oriented programming.

Claims 13, 17, 22-23 and 25-26 are substantially similar to claim 5, and therefore likewise rejected.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Non-patent Literature

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Additionally, the main number for Technology Center 2100 is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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